



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

November 17, 2011

Via E-mail

R. Brooks Sherman, Jr.
Chief Financial Officer
Inergy Midstream, LLC
Two Brush Creek Boulevard, Suite 200
Kansas City, Missouri 64112

**Re: Inergy Midstream, LLC
Amendment No. 2 to
Registration Statement on Form S-1
Filed November 3, 2011
File No. 333-176445**

Dear Mr. Sherman:

We have reviewed your filing and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

Cash Distribution Policy and Restrictions on Distributions, page 47

Assumptions and Considerations, page 54

Service Related Costs, page 57

1. We note your revisions in response to comment 7 in our letter dated October 26, 2011. We note that your analysis of transportation related costs on page 79 indicates that these costs totaled \$6.8 million in each of fiscal 2010 and 2009, and these costs are primarily comprised of fixed costs for leasing transportation capacity on a non-affiliated interconnecting pipe. We assume you are referring to the TGP interstate natural gas pipeline, on which you are reducing your contracted capacity from 490 MMcf/d to 90 MMcf/d. Please better explain why reducing your contracted capacity on this pipeline by 82% appears to reduce the related costs by only \$2.4 million annually or 35%.

Operating and Administrative Expenses, page 57

2. You disclose in the new risk factor on page 28 that the costs of defending the Anadarko litigation, even if resolved in your favor, could be substantial. However, it does not appear that the forecasted increase in operating and administrative expenses includes any costs associated with defending this litigation. If you have included estimated expenses associated with defending this litigation in your assumptions, please revise to clarify this. If you have not, please revise your estimates to reflect your expected expenses associated with defending this litigation or disclose to investors that you have not included any such expenses and explain why you are unable to do so.

Executive Compensation, page 124

3. We note your response to comment 11 in our letter dated October 26, 2011 and the related revisions in your filing and reissue this comment in part. Please clarify whether, and if so how, Mr. Moler's significant role at Inergy Midstream has impacted his compensation for your most recently completed fiscal year and, if known, how you expect this will impact his future compensation.

Certain Relationships and Related Party Transactions, page 127

Agreements with Affiliates in Connection with the Transactions, page 128

Omnibus Agreement, page 129

4. We note your new disclosure at the top of page 130 regarding your indemnification of NRGY, its general partner and certain of its affiliates "from any losses, costs or damages incurred by [them] that are attributable to the ownership and operation of ... Tres Palacios Gas Storage and US Salt following the closing of this offering...." This disclosure appears to be broader than the terms included in the omnibus agreement. Please describe in more detail the indemnification obligations of the parties related to Tres Palacios and US Salt following the closing of this offering.

Financial Statements, page F-1

Financial Statements for the Fiscal Year Ended September 30, 2010, page F-7

Note 9. Subsequent Events, page F-20

5. We note your response to comment 13 in our letter dated October 26, 2011. When you update your financial statements to the fiscal year ended September 30, 2011, please clarify to your readers how you determined there were no acquired intangible assets or goodwill associated with this acquisition, similar to your response to our comment.

R. Brooks Sherman, Jr.
Inergy Midstream, LLC
November 17, 2011
Page 3

You may contact Lisa Sellars, Staff Accountant, at (202) 551-3348 or Jennifer Thompson, Accounting Branch Chief, at (202) 551-3737, if you have questions regarding comments on the financial statements and related matters. Please contact Angie Kim, Staff Attorney, at (202) 551-3535, Catherine Brown, Staff Attorney, at (202) 551-3513 or me, at (202) 551-3720 with any other questions.

Sincerely,

/s/ Catherine T. Brown for

Mara L. Ransom
Assistant Director

cc: Laura Ozenberger
Inergy, L.P.

Gillian Hobson
Vinson & Elkins LLP